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554th January, 1960.COCOM Document 3715.20/2BCOORDINATING COMMITTEERECORD OF DISCUSSIONONITEM 1520 - RADIO RELAY COMMUNICATIONS EQUIPMENT3rd and 4th December, 1959

Present: Belgium(Luxembourg), Canada, France, Germany, Italy, Japan, Netherlands, Turkey, United Kingdom, United States.

References: COCOM Docs. Nos. 3700.2, 3 and 9, 3715.00/1, 3715.20/1 and W.P. 1520/1 to 5.

1. The CHAIRMAN opened the second round of discussion on Item 1520 by drawing the Committee's attention to the two latest proposals submitted by the German and United States Delegations (W.P. 1520/2 and 3). He invited these Delegations to introduce their proposals.

2. The GERMAN Delegate referred to his Delegation's proposal which read as follows:

"Radio relay communication equipment and specialised components and sub-assemblies therefor.

NOTE: Governments may authorise, as administrative exceptions, the export of

- (1) low power links for transmissions between the camera or studio and the television transmitter
- (2) stationary relay equipment of types which have been in use as television links for at least 5 years and possessing none of the following characteristics
 - (a) possibility of simultaneous both way connection
 - (b) bandwidth greater than ...
 - (c) non linear distortion of less than ...
 - (d) phase constant of more than ...

Export of the equipment mentioned under (2) should only be authorised where the following conditions are met:

Installation effected or supervised by Western engineers in television networks registered and recommended by C.C.I.T. and which serve to ameliorate the propagation of Western TV programmes.

Such exceptions should be notified to the Committee immediately after licensing with full details and justification. In the case there should be indication that the equipment shipped has been diverted to other uses, servicing arrangements should stop immediately."

He explained that this proposal had been drawn up to meet the views expressed in the Committee during the first round of discussion on Item 1520 and took account of the difficulty from the technical viewpoint of making an absolute distinction between television relay equipment and that used in telephony. It was for this reason that the German Delegation had reluctantly abandoned the idea of an exclusion clause in favour of an administrative exception Note on the lines of those already appearing in the International Lists.

3. The aim of the German proposal was to allow the export of equipment which, in view of its technical characteristics and of the conditions governing

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its installation, was of necessity intended for civilian uses and would serve in broadcasting Western television programmes. The German Delegation moreover hoped to restrict export possibilities to European satellite countries. This restriction would be imposed de facto by the clause stipulating that the installation should be "effected or supervised by Western engineers" - a condition which neither the U.S.S.R. nor China would accept. Qualitative control would be ensured by the time-limit prescribed. In conclusion, the Delegate stated that the text proposed by his Delegation might call for some editorial changes, but it would be necessary first of all to see if the principle involved were acceptable to the Committee.

4. The UNITED STATES Delegate first reminded the Committee of his Delegation's statement on the United States Government's evaluation of the Sino-Soviet Bloc position in the communications field (COCOM Doc. No. 3700.9). The United States Government's attitude as regards Item 1520 and the other items in this group was based on this evaluation.

5. The Delegate referred to the Note proposed by his Delegation, which read as follows:

"Governments will give sympathetic consideration to exceptions cases for the export of reasonable quantities of TV radio relays which do not exceed 5 mc video bandwidth and do not include embargoed telephone carrier or terminal equipment and where the installation:

- (1) is to be made by the West;
- (2) is intended to provide linkage between Western and Bloc TV installations existing at the time, and
- (3) is not to be placed in areas where the equipment is likely to find strategic utilisation."

He noted that the German and United States proposals had a number of points in common. They both indicated that certain exports could be contemplated under given conditions. There was, however, one point on which these proposals diverged, since the United States Delegation believed that in this highly important field each exception case should be subject to prior consultation in the Committee.

6. The FRENCH Delegate stated that his authorities had studied the matter in the light of the military interest of the equipment covered by Item 1520. The aim of this item was to prohibit the export of television equipment which might be used for modern tactical and strategic transmissions, i.e. radio relay equipment, and specialised components and sub-assemblies therefor, specially designed for the high-speed transmission of coded data, radar signals, etc., and fulfilling the security requirements involved, and that alone.

7. From a study of the German and United States proposals it was clear that both Delegations recognised the advisability of freeing the corresponding retransmission equipment in view of the fact that television transmitters were excluded from the embargo. The German Delegation had proposed a definition which distinguished such equipment from high-capacity transmission equipment (paragraph 2 above). The French Delegation were ready to agree to this proposal supplemented as follows:

NOTE - sub-para. (2)(b)
"Bandwidth greater than 6 Mc/s"

sub-para. (2)(c)
"non-linear distortion of less than 1%"

sub-para. (2)(d)
"phase constant of more than 4 millimicroseconds for a bandwidth of 6 Mc/s".

The additional parts of the German proposal might be best studied together with

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the United States proposal. The French Delegation would for their part suggest that the following extract from the United States text might be added to the German wording:

"Installations not including telephone carrier terminal equipment"

8. In conclusion, the Delegate was ready to continue discussion on the basis of the German proposal and wished to make it clear there and then that the United States suggestion for sympathetic consideration of exception cases was unacceptable to his authorities. In particular it would be very difficult to subject equipment at present excluded from Item 1520 to the prior consultation procedure once again. The administrative exception procedure together with monthly statistical reporting, on the other hand, fully met the French Delegation's views.

9. The GERMAN Delegate, referring to the United States proposal (paragraph 5 above), noted that it would now appear to be agreed that exceptions could involve not only equipment linking the camera or studio and the television transmitter, but also equipment linking transmitters. The Delegate shared his French colleague's views and stated that, since the administrative exceptions procedure already applied to certain equipment under the terms of the present definition of Item 1520, there could be no question of coming back on what had already been settled. The sympathetic consideration mentioned in the United States text introduced no new element and did not afford the relaxation required. The Delegate thought that the bandwidth appearing in the United States text should be 6 Mc/s instead of 5 Mc/s, since the former was the bandwidth used by the Soviet Bloc for television purposes. He believed that in any event the conditions stipulated in sub-paragraphs (2) and (3) of the United States text should be further clarified, and would not object to the French Delegate's suggestion to add the United States wording as regards carrier terminal equipment to the text proposed by his own Delegation, although he did not believe this addition to be necessary. As to sub-para.(1) of the United States proposal, the Delegate stated that it would not always be possible to have the installation actually "effected" by Western engineers and that the important thing was to have it supervised by Western engineers. In conclusion, the Delegate stressed that the principle of prior consultation upon which the United States proposal was based was not acceptable to his Delegation in this instance.

10. The TURKISH Delegate stated that, in view of the vital interest taken by his Government in this field, the only solution acceptable to the latter would be a Note along the lines of the one proposed by the United States Delegation.

11. The ITALIAN Delegate indicated that his Delegation were ready to take the German proposal as a basis for discussion. They believed that the technical characteristics specified therein would ensure the civilian character of the equipment exported as administrative exceptions. The Italian Delegation were also in favour of the principle of immediate ex post facto reporting. As to the United States proposal, the Delegate stated that his authorities would find it difficult to accept the principle of prior consultation, and added on a less general plane that the clause regarding the installation of equipment would prove to be inapplicable in practice.

12. The UNITED KINGDOM Delegation stated that his Delegation were in favour of the principle of freeing civilian television equipment. They felt, however, that neither the German proposal nor the United States proposal provided a satisfactory solution to this problem. The Delegate recalled that the technical aspects of the matter had already been thoroughly discussed both in 1958 and during the first round of the present review without any agreement being reached. The aim involved was to define the relays which could be used for television but not for telephony. Three factors counted in this respect: the bandwidth, the non-linear distortion and the phase constant. The United Kingdom Delegation themselves believed that, even with a technical cut-off which seemed to preclude the possibility of using a set of equipment for telephony purposes, it was easy to alter the equipment concerned so as to adapt it to the required use.

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13. The United Kingdom Delegation greatly appreciated the efforts made by the various delegations to find an acceptable formula, and would give further study to the German proposal as completed by the French Delegation. The Delegate did not, however, think that he would be able to accept this proposal, since his authorities believed that Item 1520 covered equipment of a very high strategic value. It was nonetheless true that it could cover perfectly innocuous exports, and the United Kingdom authorities consequently felt that if it were impossible to make a technical distinction between television equipment and that used for strategic purposes, the only solution would be to examine each individual case against the particular circumstances involved. Referring in this connexion to the conditions stipulated in the German and United States proposals, the Delegate believed that while the factors mentioned therein were indeed relevant they were not exhaustive, and the United Kingdom Delegation for their part would prefer to have a very short Note stating that the Committee would officially recognise the fact that Item 1520 covered equipment whose export might be innocuous.

14. The NETHERLANDS Delegate was in favour of the administrative exceptions formula if it were possible to prevent the equipment concerned from being put to strategic purposes. He believed that the German proposal was a first step in the right direction and that a text based on the general aspects of an installation was better than a technical definition. It did indeed seem impossible in practice to distinguish between equipment used in television and that used in telephony. This solution did not moreover exclude the possibility of setting up technical cut-offs if such factors were conducive to greater security. The Netherlands Delegation believed that the conditions laid down in both the German and United States proposals were relevant within the framework of an administrative exceptions system. They preferred the wording of the German proposal, but believed that both proposals might be used as a basis for discussion in seeking a compromise solution. As to the short-range and low-power links, the Delegate advocated the status quo.

15. The JAPANESE Delegate was in principle in favour of the German proposal.

16. The BELGIAN Delegate had no firm views on the matter. He was, however, more in favour of the German proposal in view of the remarks made by the United Kingdom and Netherlands Delegations.

17. The GERMAN Delegate noted that there seemed to be a certain majority in favour of his Delegation's proposal, and that the Committee as a whole recognised the need for a relaxation in the controls applied in this sphere.

18. On the 4th December, in summing up the situation once first views had been given on the German and United States proposals, the CHAIRMAN noted that the Committee was unanimous in the belief that exceptions should be provided for under the definition of Item 1520 so as to allow the export of certain equipment. He invited the Committee to try first to agree on the exception procedure to apply. Some delegations at present advocated an administrative exceptions system and others a prior consultation procedure. This was the point upon which the Committee should concentrate its efforts at the present time.

19. The FRENCH Delegate stated that he felt it was desirable to examine the problem of freeing Hertzian relays specially designed for television transmission. The German and French Delegations had submitted a proposal to which the United States Delegation had raised strong objections. The latter feared that these television relays might in fact be high-capacity telegraphic or telephone transmission relays useable in military operations. It would seem that, if there were no sure way of distinguishing them from other types of radio relays, the United States Delegation would prefer to embargo all television relays. Under the United States proposal, to authorize exceptional exports of the latter it would be necessary: 1) to supply them in limited quantities, as specified by the vague term "reasonable quantities"; 2) for the video bandwidth not to exceed 5 Mc/s, although the international limit for this type of radio relay was 6 Mc/s; 3) for installation to be made by the West, which seemed difficult at first sight; 4) for the television relays to be intended solely to provide linkage between Western and Soviet Bloc T.V. installations; 5) for them

not to be placed in areas where the equipment was likely to find strategic utilisation. These conditions appeared to be such as to make it impossible for Western industry to sell any of the equipment concerned behind the Iron Curtain. The United Kingdom Delegation, for their part, had expressed doubts as to the value of the technical clauses proposed by the French and German Delegations in the belief that they would not preclude all uncertainty or risk.

20. The French Delegation felt that, to get over the deadlock in the discussion, it was necessary to go to the heart of the matter. They were certainly eager to see changes in the Coordinating Committee's regulations, but could only conceive of changes which would best favour the defence of Free World interests. They asked the other delegations to start on the basis of the German proposal which was clear and specific and which carefully avoided reference to words such as "equipment having strategic utilisation", "equipment of strategic interest" - terms such as this introduced into this sort of discussion might well give rise to ambiguity and later lead to divergent interpretations. If the majority of delegations had advocated the study of the German proposal as amended by France, it was obviously because they believed that the sale and installation of television relays behind the Iron Curtain would not be in the least harmful, rather the contrary, to Free World strategic interests. Any equipment might be called strategic in the modern world (trucks for instance which were no longer on the embargo list), but the Committee could doubtless agree that television relays as defined by the German Delegation had very little value, for the following reasons:

- 1) Their use: these TV relays could only be used for television because (a) they did not allow of simultaneous both way use; (b) they had a non linear distortion of over 1% (amplitude distortion) was catastrophic for high-capacity telephone Hertzian relays while phase constancy was very important for television); (c) they would be supervised by Western engineers once they had been installed; (d) they included no carrier terminal equipment.
- 2) The fact that they were stationary installations made them essentially vulnerable. The interest of stationary communications installations where military uses were concerned had been dwindling with the increase in the nuclear weapon potential of both camps. Considering the vast battlefield constituted by the European theatre of operations, a battlefield which might stretch from the Atlantic coast right across to Moscow or even further, it could not be denied that any army engaged therein, whether Western or Soviet, must have communications equipment sufficient in itself, to do without the civilian communications infrastructure to any considerable extent. This necessity which had already made itself felt to the armies under the command of General Eisenhower during the European campaign, would be much more serious in the future if a major conflict were to break out. The French General Staff believed that for strategic communications in an extremely active war theatre, it was not possible to rely on the stationary infrastructure.
- 3) Lastly, if the strategic value of the television relays which it was proposed to free had to be recognised, did the Committee really think that the Soviet Bloc would order them from Free World countries? To reverse the problem, was it conceivable for instance that Hertzian relays would be purchased from Soviet firms for use in Western early warning systems, when the installation and use of such equipment had to be supervised by Soviet engineers?

21. These television relays were not of the most modern type, but on the contrary had been clearly outstripped even in the U.S.S.R., especially if compared with the types really intended for telephony purposes. In this connexion the French Delegation recalled their statement on the "Viesna" Hertzian relays (see COCOM Doc. No. 3806, paragraph 4). In conclusion, the Delegate stated that

in his Delegation's view, the German Delegation's proposal, whose merits he had just described, should be taken as the basis for discussion.

22. In reply to the various comments on his Delegation's proposal, the UNITED STATES Delegate explained that his Government were not trying to prohibit the export of television relay equipment but that, in view of the technical complexity involved and after a thorough study by competent experts in Washington, they believed that each exception case should be brought to the Coordinating Committee to enable the various participating countries to hear the views of their colleagues in this particularly delicate sphere. The Delegate explained that the words "Governments will give sympathetic consideration" should be given their full weight. He added that the words "reasonable quantities" were intended to indicate an order of magnitude and finally that the 5 Mc/s cut-off suggested by his Delegation was that proposed by the German Delegation (COCOM Doc. No. 3715.20/1) and before that by the French Delegation. According to the information available to United States experts, the 5 Mc/s bandwidth was the one suitable for civilian purposes in the Soviet Bloc. Lastly associating himself with the United Kingdom Delegate's comments as to the technical difficulties involved, the Delegate stated that, in view of the lengthy, fruitless discussion which had already taken place, it would seem advisable to leave this item in abeyance.

23. The GERMAN Delegate replied that after further, very careful study, the German authorities had reached the conclusion that the Soviet Bloc television systems used bandwidths which necessitated a 6 Mc/s cut-off. The FRENCH Delegate confirmed this statement.

24. Turning to the possibility of finding a compromise between the idea of prior consultation and that of administrative exceptions, the GERMAN Delegate stated that such a solution would of necessity be more closely linked with one or the other procedure. If it were closer to prior consultation, it might be a system of prior notification with the requesting country having the right to issue the licence automatically if no objection were raised within a few days. On the other hand, if it were closer to the administrative exceptions idea, it might be a way of providing for the suspension of the exceptions procedure should the Committee feel that this procedure was prejudicial to the aims of the embargo.

25. The UNITED KINGDOM Delegate stated that his Delegation felt that an exceptions system based on the prior consultation procedure was preferable in this field. The United Kingdom Delegation had nevertheless consulted their authorities after the previous day's discussion, and in view of the desire of several delegations to define the conditions in which Governments might, of their own accord, allow exports of the equipment covered by Item 1520. The United Kingdom authorities had not yet considered the possibility of reaching an intermediate solution such as prior notification. If, however, it would help towards reaching a solution of the difficulties facing the Committee, the United Kingdom Delegation, for their part, would be prepared to pursue discussions with a view to setting down the necessarily strict rules which would be required if prior consultation was to be avoided.

26. The NETHERLANDS Delegate submitted the following compromise proposal, which was based on the German proposal and also took account of certain elements in the United States proposal:

- "Governments may authorise, as administrative exceptions, the export of radio relay equipments for the purpose of the relay of T.V. programmes provided the following conditions are met:
- 1) Installation to be effected or supervised by Western engineers
 - 2) For television networks which are registered and recommended by C.C.I.T. or which serve to ameliorate the propagation of Western T.V. programmes
 - 3) To be installed in European satellite countries
 - 4) Installation of types of stationary relay equipment which have been in use in the West for at least two years not exceeding a 6 Mc/s video bandwidth, not including embargoed telephone carrier or terminal equipment

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- 5) Not providing a facility of simultaneous communication in both ways

Exceptions should be notified immediately after licensing with full details and justification.

This proposal reflected the Netherlands Delegation's desire to define the conditions governing exports so as to keep the risk of strategic supplies to a minimum. The Delegate stressed that the Netherlands authorities were in principle not much in favour of immediate reporting after licensing and that his Delegation had only proposed it in the present instance as a compromise.

27. The FRENCH Delegate, again stressing the need for a simple technical solution, suggested as a compromise that the Committee accept the technical definition proposed, however imperfect, try this definition out and agree to intervene when exports reached a strategic level. The French Delegation were convinced that the Committee should agree to define the equipment under embargo specifically rather than have to make this decision when each individual case came up for prior consultation. The text proposed by Germany and completed by France, like the text proposed by the Netherlands, aimed at avoiding exports of strategic equipment by defining technical characteristics and installation guarantees. A solution such as this would in the final issue be more realistic and more restrictive than one based on vaguer criteria regarding the place of installation or the initial use to which it would be put.

28. The GERMAN Delegate thanked his Netherlands colleague for his proposal, which he could accept.

29. The JAPANESE Delegate appreciated the Netherlands proposal but was not able to accept part (3), since the Japanese Delegation believed that the control to be set up should apply to the whole Sino-Soviet Bloc.

30. The FRENCH Delegate shared his Japanese colleague's view and suggested that part (3) of the Netherlands proposal be deleted and the words "preferably in European satellite countries" be added after the words "recommended by the C.C.I.T." in part (2).

31. Noting that the Committee was unanimous in the belief that exceptions should be provided for under the present definition of Item 1520, and that despite the efforts made to identify television and telephone equipment technically it had not been possible to draw up a distinction satisfactory to all delegations, the CHAIRMAN pointed out that the Committee was faced with several proposals which should make it possible to find a compromise solution. Agreement should be reached on the exceptions procedure to apply and the answer seemed to lie between the idea of administrative exceptions and that of prior consultation. The proposal submitted by the Netherlands Delegation was along these lines, and the Chairman recommended it for sympathetic consideration by Member Governments. He trusted that the Committee would be able to record unanimous agreement on this item on the 14th December.

32. The COMMITTEE agreed to resume discussion on the 14th December.

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